



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/220,223	12/23/1998	TOSHIO KOBAYASHI	20389/81866	3786
7590 05/18/2004			EXAMINER	
Michael S Gzybowski Butzel Long 350 South Main Street Suite 300 Ann Arbor, MI 48104			COLE, ELIZABETH M	
			ART UNIT	PAPER NUMBER
			1771	
DATE MAILED: 05/18/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 0512

Application Number: 09/220,223
Filing Date: December 23, 1998
Appellant(s): KOBAYASHI ET AL.

Michael S. Gzybowski
For Appellant

MAILED
MAY 18 2004
GROUP 1700

EXAMINER'S ANSWER

This is in response to the appeal brief filed 5/28/03.

(1) Real Party in Interest

Art Unit: 1771

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The rejection of claims 1-3, 6-12 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

Art Unit: 1771

4,879,170

Radwanski et al

11-1989

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-3, 6-12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed does not state "said thermoplastic synthetic fibers being non-fused throughout said fabric."

Claim 1-3, 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson, U.S. Patent No. 4,100,324 in view of Radwanski et al, U.S. Patent No. 4,879,170. Anderson discloses a nonwoven fabric comprising meltblown microfibers, and a pulp material. The microfibers have a diameter of 2-6 microns and have a length of about the same as or greater than a staple fiber, which seems to encompass the claimed range. (Staple fibers are generally known to have a length of anywhere from 25- 180mm). See col. 2, lines 46-54. The pulp material may have a length of 0.5 -10 mm. See col. 2, lines 55-62. The pulp fibers and microfibers may be present in the claimed proportions. The nonwoven may have a basis weight within the claimed range. See example IX. The nonwoven is useful as an absorbent wipe. Anderson differs from the claimed invention because Anderson forms the embossed areas via heat bonding which may reduce the absorbency of the fabric at least at the embossed areas. Radwanski et al teaches that nonwoven fabrics may be hydroentangled on a mesh screen, forming wire or apertured plate in order to form embossments or protuberances without changing the properties such as absorbency, etc., of the fabric. See col. 6, line 64 - col. 7, line 17; col. 14,

Art Unit: 1771

lines 4-41; col. 23, lines 29-50. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed the embossed pattern by hydroentangling the fabric. One of ordinary skill in the art would have been motivated to employ hydroentangling and a forming fabric rather than a heat embossing process in order to maintain the absorbency of the fabric even in the patterned areas.

(11) Response to Argument

Appellant argues that considering the specification as a whole there is basis for the limitation that the thermoplastic synthetic fibers are non-fused throughout the fabric. In support of this argument, Appellant points to those portions of the specification which indicate that while the term "embossing" is used throughout the specification, the process to which this refers is not a heat embossing process but rather a hydroentangling process. The examiner agrees that the specification does describe a hydroentangling process to provide the protuberances. Further, a limitation to the claims reciting that the nonwoven fabric is hydroentangled would overcome the 112 1st paragraph rejection. However, the specification is silent as to whether or not the thermoplastic fibers are fused. Therefore, while there is support for Appellant to define the invention in terms of what the specification does disclose, the limitation that the fibers are not fused is not present in the specification and the absence of mention of fusing the thermoplastic fibers in the specification does not constitute proper support for a limitation in the claim excluding fusing the thermoplastic fibers.

With regard to the Anderson reference, Appellant argues that the claimed fabric is distinguishable from Anderson because Anderson expressly relies on an embossing process which is performed ultrasonically or at elevated temperatures in order to form fused areas

Art Unit: 1771

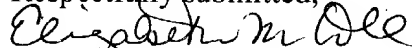
throughout the web to form a strong product while such fused areas are precluded by the claims which recite that the thermoplastic fibers are non-fused. The examiner agrees that the Anderson reference alone provides an insufficient basis to reject the instant claims because Anderson discloses heat embossing the fabric in order to form the protuberances. However, the rejection of the claims relies on the combination of Anderson in view of Radwanski. Appellant asserts that there is no motivation to make the proposed combination because Anderson requires the fused areas and that to hydroentangle rather than heat bond the Anderson fabric would destroy the teaching of Anderson by eliminating the structural strengthening provided by the fused areas. However, the motivation to combine the teachings of Anderson and Radwanski does not come from the Anderson reference, but is instead found in the Radwanski reference itself. Radwanski discusses the Anderson reference in great detail. At col. 1, line 19 – col. 2, line 12, and col. 4, lines 18-28, Radwanski details that while the nonwoven of Anderson can be formed into a fabric-like composite material having a variety of uses, the further bonding of the nonwoven either at elevated temperature or ultrasonically to form the fused regions results in a fabric which has inferior tactile and visual aesthetic properties and is thus not as desirable as a textile. Radwanski also teaches that the use of hydraulic entangling techniques rather than other bonding methods such as thermal or chemical bonding results in improved properties such as elasticity and drape. See col. 6, line 64 – col. 7, line 17. Radwanski teaches that hydroentangling coform materials produces nonwoven fabric having high wet strength and integrity, isotropic stretch and recovery properties, low linting and high durability, which are also highly absorbent. See col. 4, line 47 – 58. Radwanski further discloses that the same types of coform materials disclosed in Anderson as the starting material for the Anderson nonwoven fabric can also be used in the Radwanski

Art Unit: 1771

process. See col. 8, lines 29-55 and col. 11, lines 38-43. Therefore, it is the examiner's position that the discussion in Radwanski provides motivation for one of ordinary skill in the art to hydroentangle the web of Anderson as taught by Radwanski, motivated by the expectation that by hydroentangling the web rather than thermally bonding it, (as taught by Anderson), a fabric having more desirable properties such as improved absorbency, excellent isotropic strength, stretch and recovery, and high web strength in combination with more pleasing aesthetic properties would be obtained.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Elizabeth M. Cole


Primary Examiner

Art Unit 1771

EC

May 12, 2004

Conferees

Terrel Morris - 

Deborah Jones 

Michael S Gzybowski

Butzel Long

350 South Main Street

Suite 300

Ann Arbor, MI 48104